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PHOTO STORY No. 11

TREES -- Nature's Way to Diminish Noise

If city sounds are getting you down, perhaps you need to plant some trees.

Men have used trees as sound barriers to cut down on noise pollution since ancient times. Now forestry researchers are finding some scientific validity in this common sense practice. Experimental work on sound propagation by Forest Service researcher Raymond E. Leonard at Syracuse, N.Y., has shown that shrubs and trees -- if used correctly -- can play a major part in reducing noise.

Plant a tree, or plant two or three, and you will have produced a natural sound barrier. On the horizon may be an end to your migraines and frustrations, and the beginning of a more pleasant life.

Each 100-foot width of trees can absorb about 6 to 8 decibels of sound intensity. This may seem like a small amount in light of the fact that normal speech generates about 48 decibels; a busy intercity highway,

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Forestry scientists recommend a tree screen of at least a 100 foot depth in order to realize the maximum acoustical benefit of trees.

Trees planted along busy superhighways can absorb enough traffic noise to make living nearby at least bearable.

72 to 78; a barking dog, 92; a beeping horn, 110; a screaming jet, more than 140. But a reduction, no matter how slight, is welcome, since it can make the difference between a livable environment and one that is extremely unpleasant. We should also bear in mind that this 100-foot screen has a multiplier effect. One hundred and fifty will decrease the noise level to 9 to 12 decibels, 200 feet of trees will lower the noise level by 12 to 16 decibels, and so on.

According to researchers, sound levels above 50 decibels may be irritable to human beings; sound levels in excess of 130 decibels may become harmful.

How can trees be used "correctly" to give their maximum benefit as sound barriers?

Many factors contribute to sound control by trees. These factors include size, position, and density of trees, as well as certain meteorological conditions -- like wind, moisture, temperature, and terrain.

Along highways, dense plantings of large trees will effectively lower the level of noise, particularly if the sound source is lower than the receiver. This means that trees planted uphill of a highway will give

Trees planted around airports can lower the noise of ground aircraft to make conditions for those within earshot at least comfortable.

maximum sound control.

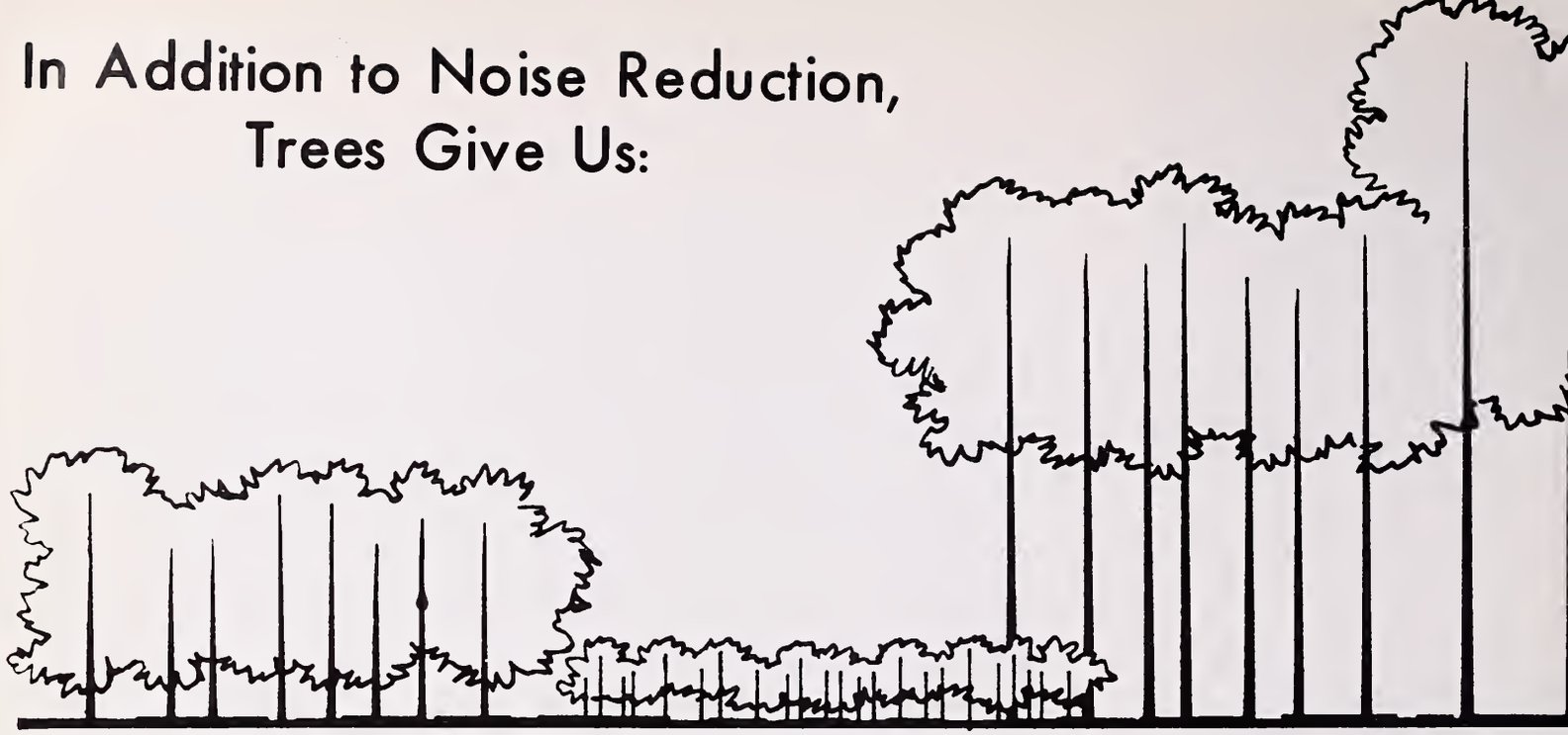
Trees will also effectively moderate wind and temperature, and, in so doing, reduce any influence that these two factors might have on the transmission of sound.

Often the human senses of sight and sound can reinforce one another, so that seeing what causes a noisy discomfort will tend to aggravate it. On the contrary, if the source of sound is made invisible, the sound will not seem so harsh to the ear. As another approach to noise abatement, therefore, trees can be planted to screen or camouflage noisy neighbors. And this will have a marked effect on lowering unwanted sound.

Consideration should be given to the location of the source of sound. In the case of aircraft, a belt of trees around the airport will reduce sound levels when the aircraft are on the ground. However, once they are airborne the sound has only to penetrate through the thin forest canopy.

Still, if it's city noises that are getting you down, perhaps you should remove your earmuffs, take away the blinders, and plant yourself some trees. Trees are one of nature's ways to make your environment more pleasant.

In Addition to Noise Reduction, Trees Give Us:



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